87

~~SECRET~~

OFFICE OF THE SE TARY OF DEFENSE
W EN WITH A ACHMENTS

May 5, 1959

MEMO FOR Mr. Albert P. Toner
The White House

The attached items are submitted by the Department of Defense for possible inclusion in the daily summary for the President.

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Items 1 and 2 have also been sent to Dr. Killian.

O. M. Gale
Special Assistant

Attachments
3 items

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4.5.59
SecDef Cont. No. 5-679

THE WHITE H
WASHINGTON

May 6, 1959

General Goodpaster:

Ref: SN # 540, Item # 2

Earlier details were forwarded by April 27 memos from Russell and me, in response to the President's interest.

A. P. Toner apt

Attachment
Orig. DOD item #1 of 5/5/59 (S)

([illegible] 8/3/59)

R-2
06-M-0882

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1. **DISCOVERER II Recovery and Changes in DISCOVERER III ~~(Secret)~~ (Reference Item 4, April 27, 1959 Report)**

SN#540
Orig hd w/SN Amb't on 5/6

The results of the search in the Spitzbergen area for the capsule ejected from DISCOVERER II are negative insofar as capsule recovery is concerned. The findings of Air Force personnel who actively participated in the search convincingly confirm telemetry information that capsule ejection did take place and further that programmed events took place in proper sequence. Components such as retro rocket, parachute and light worked successfully and calculations for distance travelled during separation and descent were within tolerance for recovery in the planned area had the unfortunate timer reset difficulty not been encountered.

There is no positive evidence that the capsule was recovered by Soviet personnel who are, by treaty with the Norwegian government, engaged in coal mining operations on Spitzbergen. However, it has been reasonably well established, by search pattern tracks in the snow, that the Soviet personnel did engage in a search for the capsule. If the capsule was recovered by the Soviets, no serious compromise of technical information was effected.

Modifications are underway for future DISCOVERER launchings to avoid a repetition of ejection and impact in other than the planned recovery area. These modifications include a new programmer or timing mechanism which has more flexibility than the one used in DISCOVERER II. Preprogrammed orbital period can be reset by command to coincide with actual orbital period in two ways. In addition, longer expanses of time during which command contact with the satellite can be exercised, are being programmed to avoid inadvertent loss of command control by out of phase initial orbital period. Also by means of telemetry, a display of the orbital period setting is provided at the ground station.

These modifications will be incorporated in the next DISCOVERER launch scheduled for 21 May 1959 and will improve to a great extent, the probability of impact in the planned recovery area. The modifications should eliminate loss of communication and control capability and the reset error which resulted in loss of command control of DISCOVERER II during critical orbits.

(Carbon destroyed 8/11/59)

(Filed 8/3/59)

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4:55p

DoD 5-5-59

Item 1. **DISCOVERER II Recovery and Changes in DISCOVERER III Continued**

SN#540 (Cont'd)

To further improve reliability and success probability, additional engineering analyses and parallel preparation for equipment changes are being conducted. One of the changes to be incorporated, if the analysis determines it to be desirable, is an arming device which would be triggered by command to allow ejection only if all equipments are functioning properly. An engineering report is to be submitted by the contractor on 15 May 1959. This report in conjunction with operational experience concerning modifications incorporated in the next DISCOVERER will provide further guidance as to which, if any, of the alternate or additional modifications should be incorporated in subsequent launches.

Dist. B i/SN

It is believed that the engineering steps being taken will provide maximum assurance against accidental capsule ejection and impact in or adjacent to Soviet territory.

(Carbon destroyed 8/11/59)

(Dist'd 8/3)

4:55P

~~CONFIDENTIAL~~

SN#540

3. F4H-1 Flight Test Program ~~(Confidential)~~

Through 1 April 1959, five F4H-1* airplanes have flown 301 flights, totaling over 294 hours. An altitude of 86,000 ft. has been achieved and, at lower altitude, a maximum speed of 2.24 Mach. Of ten Sparrow III+ firings, five live and five inert, one was accomplished at a speed of Mach 2.0 and one at an altitude of 50,000 ft.

In the 11 months since first flight the F4H-1 has accumulated more flight test time than most other Navy programs, enabling the contractor to expand the flight operating envelope to the point where he has already met most of his contract guarantees. No significant difficulties are apparent at this point.

* Per phone call from Oliver Gale, this is a carrier based aircraft
+ " " " " " ", this is an air-to-air missile which can be launched from the F4H-1 and other Navy aircraft

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(Carbon destroyed 5/6/59)

~~CONFIDENTIAL~~

4:55p

DoD 5-5-59

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OFFICE OF THE SECRETARY OF DEFENSE

December 21, 1960

MEMO FOR MR. CHRISTOPHER H. RUSSELL
THE WHITE HOUSE

The attached items are submitted by the Department of Defense for possible inclusion in the daily summary for the President.

These items have also been forwarded to Dr. Kistiakowsky.

George S. Brown
Brigadier General, USAF
Military Assistant

2 Attachment items
2 - SN#876

~~SECRET~~

[illegible] 11:45a

[illegible] Cont. No. S-1058

R-2
06-M-0890

SN#876

2. Launch of DISCOVERER XIX. (SECRET)

DISCOVERER XIX was launched from Vandenberg Air Force Base at 1537 EST, 20 December 1960. Confirmation of orbit of this, the 4th AGENA B and the second to be launched by a THOR DM-21, was obtained at 1704 EST, 20 December 1960. The planned and actual parameters for this satellite are as follows:

	Planned	Actual
Period	93.0	92.96
Perigee	113 n.m.	103.9 n.m.
Apogee	345 n.m.	348 n.m.
Eccentricity	.032	.033
Inclination	81.8°	83.43°

The DISCOVERER payload for this flight operation will be a non-recoverable MIDAS radiometer with an active orbit lifetime of 4 days. This test will be first of a series of two radiometric engineering tests, purpose of which is to intensify collection of radiation background data during time period of 2 to 4 months prior to the launch of MIDAS III. Attempts will be made to obtain usable background radiation data in 2.7 and 4.3 micron infrared bands by demonstrating the capability of the MIDAS type radiometer operating in conjunction with the DISCOVERER satellite system. Four additional telemetry receiving stations will be used to augment the DISCOVERER tracking station network to acquire radiation data over more diversified areas of the world. These stations are located at Cape Canaveral, [redacted] [redacted] and [redacted]

The AGENA satellite is definitely unstable in its present orbit. No reason for this is know at the moment. This instability will not seriously affect the MIDAS experiment and some useful data should result from this test.

(Carbon destroyed 12/21/60)

SECRET

11:45a

DoD 12-21-60